

# **Building a Shallow Army: Replacement Operations in the Future Force**

**A Monograph  
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## Abstract

“Building a Shallow Army: Replacement Operations in the Future Force” by MAJ Robert R. Mackey, U.S. Army, 53 pages.

The United States Army has spent substantial resources and effort developing a cohesive plan for adapting to the changing world environment of the twenty-first century, commonly called ‘transformation.’ The Army has experimented and fielded new weapons systems, tested new organizational structures and evaluated radical tactical doctrines to meet the challenges of the future. However, one critical facet has been relatively ignored, the ability to replace personnel losses in the Future Army.

The Interim and Objective Forces both lack a workable system to replace combat losses, especially in a high-casualty producing conflict, such as urban operations or a war against a similarly equipped foe. While the organizations themselves are designed to outfight enemies with a combination of precision firepower and mobility, the simple fact remains that war causes casualties. Historical examples from the 1973 Arab-Israeli War and the 1995 Russian-Chechen conflict, along with statistical studies, all demonstrate that warfare throughout the ages is a costly business, and that no evidence exists that future conflict will be bloodless.

Sadly, the personnel replacement system in no way can support the 96-hour deployment concept of the Future Army. The present personnel system is a relic of World War II and the Cold War, meant to operate only when given ample warning time to mobilize and prepare. At its best, the present system produces replacements weeks after mobilization, while the Selective Service System takes nearly a year to train the first conscript. The U.S. Army’s Reserve system is not much better, handicapped by the fact that the units responsible for mobilization of replacements require mobilization themselves. The result could be catastrophic as rapidly deploying units fight to exhaustion before the first replacements arrive.

Several solutions exist that could remedy this situation. First, the active force replacement system can streamline its operations and save several critical days during initial deployment. Secondly, the possibility of limited conscription for the sole purpose of rebuilding the Individual Ready Reserves would provide hundreds of thousands of replacements in case of a major war. Lastly, a new concept, U.S. Army Reserve Replacement Battalions, could provide a steady stream of well-trained crews, teams and squads into the Future Army to ensure continued combat operations.

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# CHAPTER ONE

## Introduction

Since the end of the Cold War, the United States has had the luxury of maintaining a relatively small standing army, given its global commitments. As the twenty-first century dawns, the U.S. is preparing to substantially change the organizational structure of its Army, introducing smaller, lighter and more strategically mobile units as part of a developing process that will ultimately result in an Objective Force capable of operating globally within 96 hours of initial alert. Much thought and evaluation is going into the development of specialized equipment, from a light and highly deployable armored gun system, to smart munitions and robotics to make Objective Force units more lethal than ever before. Central to the success of the Interim and Objective forces is their ability to deploy and fight within limited temporal constraints, a revolutionary move away from the traditional American military experience of large-scale mobilization to prepare for war. However, a major disconnect exists between current doctrine on replacement operations, as outlined in Field Manual 12-6, Personnel Doctrine, and the time limits imposed upon the Interim and Objective forces to get into battle. Getting troops into battle within 96 hours is a laudable concept worth of development, but can this new force, given the current doctrine, reconstitute itself during intense combat operations—from recovery after a WME (weapons of mass effects) attack to heavy urban combat? Can the Army, especially during the period of the next 15 years, when Legacy, Interim and Objective force units are all in the force structure simultaneously, meet the challenge of rebuilding its combat power on the future battlefield?

It is the goal of this monograph to examine the key question of reconstitution of combat forces in the U.S. Army of the next 15 years. To adequately examine this question, several evaluative criteria are used. First, assumptions concerning the increased lethality of the modern battlefield are defined, based upon historical examples and present modeling systems. Secondly, the research question is examined in light of the ability of the United States Army to replace combat losses. This includes both mobilization and conscription issues, and an evaluation of present and projected training base capabilities. Thirdly, the ability of the current Reserve system in the United States, long assumed by planners to provide a pool of both individual and unit replacements in wartime to backfill Regular Army units is a key evaluative criterion. In the same vein, issues surrounding Reserve mobilization times, for both troop units and individuals, are considered. Lastly, the impact of a mixed force of Legacy, Interim and Objective Force units, given the technological and training differences between the elements, upon the replacement system is considered.

This monograph is organized to both simplify and examine the key issues surrounding reconstitution in the future Army. After a brief introduction of the question and its historical background, this paper considers the issue of casualties in modern war. Since Vietnam, the United States has assumed that any future conflict, outside of a global war against the Soviet Union or another superpower, will cost few American lives. The seemingly bloodless engagements of the Gulf War and the Balkans, where Iraqi tank rounds bounced off American tanks and U.S. 'smart bombs' were shown surgically Serbian facilities beyond the reach of enemy air defenses, perhaps has given military and political leaders a false model for future warfare. Consequently, this paper will discuss the issue of lethality in modern warfare, establishing the idea that future conflicts may be far bloodier for the United States than the military operations of the 1990's.

The keystone of this paper will be an evaluation of the United States' present, and expected future, ability to quickly replace combat losses through a combination of mobilization of

the Army National Guard and Army Reserve, and through an increase in military manpower (either due to an expansion of the Regular Army's manpower, or through conscription). The final section of this work will focus on recommendations for revising the current replacement system to ensure that the future Army does not quickly arrive to a global hotspot but lack the ability to conduct sustained operations while maintaining the ability to mobilize for long-term operations.

## **Historical Background**

Mobilization and conscription have formed the basis of the U.S. Army's replacement system since the American Civil War. In that conflict, both the Union and the Confederacy initially depended upon a mixture of state militias, volunteers, and in the case of the Federals, regular units to fight the war. As casualties mounted, both sides turned to increased enlistment bonuses (or "bounties") to draw more recruits. By 1863, both sides had introduced conscription.<sup>1</sup> A second major issue plagued the Civil War replacement system, that of actually getting new recruits to the units in the field. The state-based enlistment system led many governors, both North and South, to opt to raise new companies and regiments over providing replacements for existing units in order to reward political allies with military commands.<sup>2</sup> The result was larger, but green, regiments, mixed with the remnants of the first volunteer units. For example, the famous 20<sup>th</sup> Maine Volunteer Infantry Regiment, of Little Round Top fame, entered the Battle of Gettysburg with approximately 350 men (including nearly 150 men from the 2<sup>nd</sup> Maine) out of an 1862 muster strength of nearly 1200.<sup>3</sup>

The overall personnel system of the Spanish-American War of 1898 closely resembles that of the U.S. Army of the late 1990's in several ways. The Regular Army performed the bulk

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<sup>1</sup>Center of Military History, American Military History (Washington, D.C.: Government Printing Office, 1989), 277-78. Conscription in the North was relatively limited; in fact, the Enrollment Act of 1863 did more to encourage volunteer enlistments than it did to establish a legally recognized precedence for future drafts. See *ibid.*, 278.

<sup>2</sup>Archer Jones and Herman Hattaway, How the North Won: A Military History of the Civil War (Urbana., Ill.: University of Chicago Press, 1991), 273-77.

<sup>3</sup>Bruce Catton, The Army of the Potomac: Glory Road (Garden City, N.Y.: Doubleday and Co., 1952),



of the fighting, while U.S. Volunteer and State Militia regiments (the forerunners of the U.S. Army Reserve and Army National Guard) provided additional combat units and personnel. The short duration of the war and the increased size of the Regular Army precluded the use of a draft to fight the conflict.<sup>4</sup> The First World War was substantially different. The Army, while nearly ten times as large in 1917 as it had been in 1898, organized on a regimental basis; no divisions existed in the U.S. Army in April 1917. In mid-May, 1917, Congress passed the Selective Service Act to build up the Army. General John J. Pershing, commander of the American Expeditionary Force in France, ultimately asked for an 100 division army, numbering well over 5 million men, to fight in Europe by mid-1919. While the U.S. never fielded that many divisions, it did manage to develop a workable replacement system for the ever-growing U.S. field armies. Unlike the past, the War Department centrally controlled replacements, not individual states, and the American Expeditionary Force in France established replacement depots in rear areas to keep a constant flow of troops to the forward combat units. With little change, the World War I system is still the replacement system of the U.S. Army.<sup>5</sup>

The interwar period did little to change the standing replacement system of the Army. The War Department organized National Guard divisions, along with the Army Reserve, but the ability of either organization to backfill the Regular Army was never tested. When the U.S. reintroduced conscription in 1940, it repeated many of the same growing pains that plagued the

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292.

<sup>4</sup>This is not to say that all went smoothly for mobilization in 1898. The 100,000-man National Guard was poorly equipped and trained, and the Regular Army, numbering only 26,000, was scattered in detachments across the American West. In addition, there was no mobilization plan of any kind for the United States Army, and the Army lacked a centralized planning staff to develop one. Luckily, the U.S. succeeded in winning on the battlefield with the mixed bag of Regulars and Volunteers. The lessons of 1898 led to the famous Root Reforms of 1903, which established the framework for the twentieth century U.S. Army. See American Military History, 323-25, 346-52.

<sup>5</sup>American Military History, 373-75. The personnel replacement system still had problems. As the first large-scale mobilization since the Civil War, a host of problems arose in classifying men where they could do the most good. For example, the U.S. Army initially sent men with special talents, such as mechanics, to infantry units. In France, the AEF culled these men from the deployed division and placed in special schools, which greatly disrupted the losing units. The result was that some divisions were broken up into replacement units in 1918, to backfill the forward fighting divisions. See Edward M. Coffman, The War to End All Wars: The American Military Experience in World War I (Madison, Wis.: The University of

Army in 1898 and 1917. Poor to non-existent training camps, lack of equipment, and a measure of confusion regarding the desired size of the Army all served to confuse the initial mobilization in 1940-41.<sup>6</sup> American material and manpower wealth overcame many of these weaknesses and the U.S. began active combat against the Axis in late 1942. However, a second personnel problem developed following the D-Day invasion in June 1944. Using erroneous planning factors, U.S. strategists had determined that ample infantry replacements existed to sustain the Army after the invasion and until the fall of Germany. Instead, the heavy fighting in Normandy, combined with losses in the fall offensives, resulted in a huge deficit of infantry and armor replacements. By the Battle of the Bulge, many American divisions, such as the 28<sup>th</sup> Infantry, were unable to rebuild their strength without moving off the front lines; their replacements were often green divisions arriving from the U.S. The U.S. Army never permanently solved the combat manpower dilemma during the war, although some stopgap measures (the retraining of anti-aircraft, support and service troops as riflemen is one such example) did enable the U.S. Army to continue to fight throughout the spring and early summer of 1945.<sup>7</sup>

The end of World War II resulted in a rapid demobilization of American military strength. Consequently, the invasion of South Korea by the heavily-armed North Korean People's Army in June 1950, caught the U.S. military unprepared. To meet this new war, the Army rejected the World War II replacement system (units in, units out, with a constant stream of personnel flowing into the existing units) and went to a time-in-country based system for individuals. The result was that individual soldiers, not entire units, rotated in and out of country

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Wisconsin Press, 1986), 67-68.

<sup>6</sup>The U.S., at one point, planned to field nearly 200 divisions to fight Germany alone. While the estimated size of the 200-division force was nearly the same as the Army's end strength in May 1945 (nearly 8.2 million men), the initial planners failed to consider the huge logistical tail (and all the service troops needed to maintain it) needed to fight in World War II. See Russell F. Weigley, The American Way of War: A History of United States Military Strategy and Policy (Bloomington: Indiana University Press, 1977), 316-17.

<sup>7</sup>Russell F. Weigley, Eisenhower's Lieutenants: The Campaign of France and Germany, 1944-1945 (Bloomington: Indiana University Press, 1981), 370-75.

as soon as the DEROS was up—and the result was a constant reduction in the combat effectiveness of the fighting forces.<sup>8</sup>

The Vietnam War accelerated the problems with the individual rotational replacement system. Officers were limited to six-month command tours, while enlisted men held to a twelve-month rotation in and out of Vietnam. According to one historian, this resulted in “a personnel policy about as detrimental to the conduct of counterinsurgency operations as if it had set out with the worst intentions in mind.”<sup>9</sup> In the aftermath of the war, American military leaders realized that the use of conscripts in Vietnam, the failure to mobilize the nation through the National Guard and Reserves, and the destructive personnel rotation systems negatively affected U.S. military capabilities.

The 1970’s were a time of change for the U.S. Army. With the end of the draft and the introduction of the all-volunteer force, the Army’s senior leaders took a hard look at the organization, doctrine and training of the force. What they found was that the U.S. Army had become a “hollow” army, lacking a coherent doctrine for warfighting, demoralized by the Vietnam War and relatively untrained in modern warfare.<sup>10</sup> Along with a new fighting doctrine, a new manpower concept developed as well. Chief of Staff of the Army General Creighton Abrams also demanded a higher level of integration of the Regular, National Guard and Reserve forces. Called the “Total Force” program, Abrams intended that the Regular Army would never again go to war without the support of the American people. The easiest way to do this, he believed, was to ensure that critical support elements needed for modern warfare, such as medical, transportation and logistics units, transferred out of the standing force and into the

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<sup>8</sup>T.R. Fehrenbach, This Kind of War: A Study in Unpreparedness (New York: MacMillan Co., 1963, reprinted Ft. Leavenworth, Kan.: USACGSC, 1994), 503-505.

<sup>9</sup>Andrew Krepinevich, The Army and Vietnam (Baltimore, Md.: The Johns Hopkins University Press, 1986), 205.

<sup>10</sup>The 1973 Arab-Israeli War, often called the “October War,” played a major role in fostering change in the U.S. Army’s doctrine. The heavy casualties caused by Egyptian anti-tank and anti-air missile systems shocked the U.S. leadership as much as it did the high command of the IDF. See Paul H. Herbert, Deciding What Has to Be Done: General William E. DuPuy and the 1976 Edition of FM 100-5, Operations (Ft. Leavenworth, Kan.: Combat Studies Institute, Command and General Staff College, 1988), 25-36.

reserves.<sup>11</sup> In addition to the transfer of key support functions to the Reserves, Abrams also directed the establishment of a 16 division Army, consisting of both Active and National Guard combat divisions, focused on fighting the Soviets in central Germany. By integrating all of the forces of the U.S. Army into a single organization for warfighting, General Abrams and his contemporaries created the structural paradigm that ultimately won the Cold War and the Persian Gulf War in 1991.<sup>12</sup>

By the late 1980's, the post-1973 army resembled its predecessor in name only. With few exceptions (82d Airborne, 2d Infantry in Korea, and the forward deployed divisions in Europe), each active duty division consisted of two active brigades and a third "roundout" Reserve-component brigade.<sup>13</sup> While this organizational framework did wonders for Reserve training standards and overall Army readiness, it failed in one important aspect. The Army leadership, by moving the Reserves away from their implied role as a replacement pool for the Regular Army units during war and toward unit-level integration with the Regular forces, effectively eliminated the personnel sustainment system that existed. No longer would the Reserves backfill the Regulars, since they would be on the ground as cohesive units from almost the beginning of hostilities—now only a draft or a massive expansion of the standing army could provide the manpower needed to replace the expected losses as seen in the 1973 Arab-Israeli War.<sup>14</sup>

The force imbalance between U.S. and Iraqi forces during the Gulf War resulted in low American losses and high Iraqi losses. The U.S.-led Coalition forces lost only 378 personnel

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<sup>11</sup>Lewis Sorley, "Creighton Abrams and Active-Reserve Integration in Wartime," *Parameters* 21/2 (Summer 1991): 35.

<sup>12</sup>*Ibid.*, 45-49.

<sup>13</sup>Robert H. Scales, *Certain Victory: The U.S. Army in the Gulf War* (Ft. Leavenworth, Kan.: CGSC Press, 1994), 18.

<sup>14</sup>General Scales notes that nearly 70% of the CSS units in the Kuwaiti Theater of Operations (KTO) came from either the Army National Guard or Army Reserve. In addition, the separate combat brigades of the Army National Guard were organized and equipped to deploy as a cohesive unit, not individual replacements. Few National Guard brigade-sized combat units went to the Gulf before the end of hostilities. See *ibid.*, 378.

KIA, while inflicting between 25,000 and 75,000 casualties on the Iraqis.<sup>15</sup> Given the lethality of the modern battlefield, the United States Army was both extremely skilled and extremely lucky in the Gulf War. Many lessons from the conflict have been applied to the development of the future Objective Force; the emphasis on precision munitions, joint operations and extensive C4ISR networks are just a few of the examples drawn from the Gulf War relevant to the future Army. However, the lethality of the battlefield, except when applied to the enemy, has been ignored. In an environment where the U.S. enjoys nearly complete superiority in the air, on the ground and at sea, such an approach is valid. In an environment where U.S. technological superiority can be limited or reduced in effectiveness, the possibility of substantial friendly casualties exists. Despite the substantial benefits to the Army of the Interim and Objective forces, the danger still exists that such forces will be unable to conduct sustained operations solely due to personnel losses, yet a personnel replacement system to support these organizations has been virtually ignored. Friendly casualties in future combat operations, based on the examples noted in the following chapter, are a realistic expectation for both the Interim and Objective forces, and must be an integral part of shaping and sustaining the future Army.

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<sup>15</sup>Internet data gathered from multiple sources. Primary source for Iraqi losses is from [www.wikipedia.com/wiki/Gulf\\_War](http://www.wikipedia.com/wiki/Gulf_War), last visited on 15 October 2001. Some sources cite as many as 100,000 Iraqi military and civilian casualties, however these numbers are not exact and may be based upon data supplied by the Iraqi government.

## CHAPTER TWO

### Casualties, Modern War and the Transformed Army

Transformation, according to Army Chief of Staff General Eric Shinseki, is needed to ensure that the Army remains a “strategically responsive force that is dominant across the full spectrum of operations,” from small-scale contingencies to global war. To do so, the Army must field a force “that is responsive, deployable, agile, versatile, lethal, survivable, and sustainable.”<sup>16</sup> Consequently, military planners have devoted substantial work toward developing technologies that will enable this future force to fight and win quickly on the future battlefield. However, unlike armies of the past, the Interim and Objective force units lack the inherent ability to continue combat operations in the face of heavy casualties sustained over a short period. The seemingly indestructible nature of the huge Industrial Age armies, supported by a strong industrial base and conscription, enabled past armies to lose huge numbers of men and equipment and continue to fight.<sup>17</sup> Yet, the future U.S. Army does little to address this weakness, other than

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<sup>16</sup>Headquarters, Department of the Army, Army Modernization Plan 2001 (Washington, D.C.: HQDA, 2001), 10.

<sup>17</sup>The Second World War is the perfect model for Industrial Age warfare. Given the constraints of global transportation, armies in World War II were limited in their ability to project combat power in sufficient amounts rapidly to achieve decisive results. Consequently, time (as a planning factor) was less important in World War II, since a combatant nation could mobilize, train and equip armies faster than another nation could raise troops and then project that power overseas. This is one reason that it took the Western Allies nearly three years of preparation before the Normandy landings in 1944. In the end, victory came due to the ability of the Allies to mobilize their manpower and industry to a greater scale than the Axis, and the destruction of the industrial base of the Axis Powers by a combination of strategic warfare by air and sea and ground occupation of the enemy homelands. See Williamson Murray and Allan R. Millett, A War to Be Won: Fighting the Second World War (Cambridge, Mass.: Belknap Press, 2000), 527-53.

the organization of better combat medical systems and the assumption that replacement operations are the responsibility of units above divisional level.<sup>18</sup>

At its most basic level, the concept behind the future U.S. Army is that using superior doctrine, technology and equipment, ground forces can avoid the costly attrition-based warfare of the past. In effect, the belief that future war, while recognized, as “brutal, ugly, destructive and personal” will be so only to the enemy and not to the United States. Instead, the U.S. Army maintains that American troops will meet rising threats with greater “physical and mental endurance of soldiers, leaders, and units” to overcome numerically larger enemy forces, and that a combination of information dominance and integrated systems on future combat forces will prevent heavy losses.<sup>19</sup>

As practiced since 1973, warfare not lessened in intensity or lethality, especially between similarly organized and equipped conventional military forces. In recent years, the United States fought and defeated enemies that deign to fight against American strengths. The combat experiences since Vietnam—expeditionary operations to Grenada and Panama, and the Gulf War—have been against foes who were either too weak to put up effective resistance or tried to fight using outmoded tactics against 1990’s technology. In each case, the enemy forces facing the U.S. took substantial casualties in relatively short periods. For example, Iraq lost 10,000 military and civilian dead in the month long campaign, while nearly 600 Panamanians died in only three days.<sup>20</sup> What will happen when the enemy no longer fights as the U.S. wishes them to fight? What if the enemy gains a technological or tactical advantage, however temporary, that

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<sup>18</sup>See Headquarters, Department of the Army, IBCT O&O, dated 30 June 2000, 41-62.

<sup>19</sup>*Ibid.*, 4.

<sup>20</sup>Gulf War data from the Imperial War Museum, London, available online at <http://www.iwm.org.uk/collections/books/bookfaqs17.htm>, last visited on 5 December 2001. Some estimates of the Gulf War are as high as 100,000 killed, but are not recognized by either the UN or other reputable organizations. The Imperial War Museum uses the numbers cited by the United States and United Kingdom official casualty counts from the war. Panama data is from several sources and are highly debatable. The U.S. government officially states that the fighting killed 314 Panamanian military personnel, along with an estimated 300 Panamanian civilians. Some human rights groups dispute these numbers. See the Physicians for Human Rights synopsis of the Panama Invasion at [http://www.phrusa.org/research/health\\_effects/humoje.html](http://www.phrusa.org/research/health_effects/humoje.html), last visited on 5 December 2001.

unhinges a key piece of the U.S. 'system of systems,' much like the Egyptians did to the Israelis in 1973?

While the possibility clearly exists that the most recent 'Revolution in Military Affairs' has dramatically shifted the entire concept of modern warfare from attrition to the elimination of systems, it should not be assumed that this means the end of substantial U.S. casualties during combat. Given the uncertainty of predicting future events, studies of past conflicts provide the sole source of concrete data for the study of casualties in war. The 1973 Arab-Israeli War, often called the Yom Kippur or October War, provides one such example, that of combat between symmetrical/conventional opponents, where the technological and doctrinal playing fields are relatively level. The relatively short conflict was one of the bloodiest in the twentieth century. In a mere nineteen days, Israel lost 840 tanks and 14,000 men, against their opponents' loss of 2,500 tanks and APC's and over 36,000 casualties.<sup>21</sup>

A second, more recent conflict that provides a clear example of the costs of modern warfare is the 1995 Battle of Gronzy, during the continuing Russian-Chechen War. The fighting in the Chechen capital is a clear case of asymmetrical/unconventional warfare, where the Russian Federation had superior equipment and a clearly defined combat doctrine (inherited from the Soviet Union) for conventional war. To the Russians' dismay, they discovered that urban combat against a conventionally armed irregular foe in the modern era is just as deadly as it had been in World War II. The first month of the fighting around Gronzy, 1-25 January 1995, where the Russians lost two modern, well-equipped motorized brigades, with heavy air support and armor, is the focal point of this case study.

Lastly, casualty calculation for sustained combat operations depends not only on historical examples, but also on extrapolation of formulae and other data from past conflicts, weapon-effects studies, and other numerically based concepts. Consideration of only isolated

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<sup>21</sup>Trevor N. DuPuy, *Elusive Victory: The Arab-Israeli Wars, 1947-1974* (Dubuque, Iowa: Kendall/Hall Publishing Co., 1992), 609.



case studies without examining entire conflicts from a quantitative viewpoint is of little use to military planners, since individual firefights are often extremely costly, whereas the overall casualties for an extended war could be comparatively small. The final section of this chapter will address several important concepts that directly address the issue of casualties in the future force, based on recent statistical studies.

### **The Yom Kippur War: 1973—Symmetrical/Conventional Conflict**

General William E. DuPuy, commander of TRADOC in the mid-1970's, wrote that there were three major lessons that the U.S. needed to learn from the October War. First, that modern weapons were more lethal than ever before. Secondly, that to survive on the battlefield, combined arms teams were critical, and lastly that both individual and unit training made the difference between victory and defeat.<sup>22</sup> For the Israeli Defense Forces (IDF) and for the Egyptian Army, the eighteen-day war represented the most destructive and costly conflict in their troubled histories.

The IDF entered the war with the most powerful, experienced and motivated military in the Middle East. After the relatively cheap and quick decisive victory of the 1967 Six-Day War, Israeli military might was evident to the world.<sup>23</sup> Supplied with top-of-the-line U.S., British, and French military hardware, the Israelis believed they were prepared for war both technologically and doctrinally. When the Egypt-Syria Alliance attacked on 6 October 1973, they took the IDF by surprise. The first Egyptian assault troops breached the Bar Lev defense line along the Suez

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<sup>22</sup>Richard M. Swain, ed., Selected Papers of General William E. DuPuy (Ft. Leavenworth, Kan.: Combat Studies Institute, 1994), 76-77.

<sup>23</sup>The Israelis lost slightly over 5,000 killed, wounded or missing in 1967 out of a force of nearly 250,000 men. In contrast, the Egyptians suffered 10,000 casualties; the Jordanians lost 80% of their armored forces destroyed and over 6,700 men. All totaled, the Arab alliance lost almost 20,000 troops and hundreds of aircraft and armored vehicles in addition to the Gaza Strip, the Sinai, the West Bank and Jerusalem. See George W. Gawrych, The 1973 Arab-Israeli War: The Albatross of Decisive Victory (Ft. Leavenworth, Kan.: Combat Studies Institute, 1996), 3.

Canal, overrunning the isolated and surprised Israeli strongpoints. The Egyptians then proceeded to overturn Israeli, and, by implication, U.S. tactical doctrine. Knowing that the IDF would respond to a breakthrough with an immediate armored counterattack, the Egyptians set up anti-tank guided missiles (ATGMs) and surface-to-air anti-aircraft missiles (SAMs), supported by anti-aircraft and anti-tank guns, modern Soviet tanks, and heavy indirect fire support, in a layered defense of the breach sites.<sup>24</sup> The Egyptians massacred the attacking Israeli tanks and aircraft. The Egyptians shot down nearly half the IDF close air support (CAS) sorties launched on the first day (only the U.S.-made F-4 Phantoms and A-4 Skyhawks, both notoriously rugged aircraft, were able to take hits and survive). The attacking 7<sup>th</sup> Armored Division did just as badly, losing seventy-five percent of its 300 tanks within twenty-four hours without appreciable gain or inflicting equivalent losses on the Egyptians.<sup>25</sup> In the end, the IDF, with the help of a massive U.S. airlift of equipment, counterattacked the Egyptians, driving them back across the Suez Canal.

In the north, the Syrian Army attacked with three divisions against the Golan Heights, destroying the outlying defense line and cutting off numerous small outposts in the area. As in the Sinai, the IDF launched immediate counterattacks according to their aggressive tank-based doctrine. The results were much the same; one IDF armored battalion commander had three tanks shot out from under him within twelve hours.<sup>26</sup> While the Syrians inflicted heavy losses on the Israelis, they failed to use the supplied Soviet equipment with the same skill as the Egyptians. Ultimately, the IDF defeated the Syrian divisions on the Golan, and drove toward Damascus.<sup>27</sup>

As a case study of modern warfare, the 1973 Arab-Israeli war provided a fertile ground for change. U.S. tactical doctrine, military education, training and equipment radically adapted to

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<sup>24</sup>This was the first battlefield use of the Soviet-made SA-7 “Strella” SAM and the man-portable “Sagger” ATGM; in addition, the Egyptian infantry carried large numbers of RPG-7 anti-tank rockets. See DuPuy, *Elusive Victory*, 413.

<sup>25</sup>DuPuy, *Elusive Victory*, 418-21.

<sup>26</sup>Avigdor Kahalani, *The Heights of Courage: A Tank Leader’s War on the Golan* (New York: Praeger, 1992), 54.

the new environment. As mentioned earlier, the Yom Kippur War had a dramatic impact on the organization and training of the U.S. Army in the 1970's and 1980's—it was this force that ultimately won the 1991 Gulf War.<sup>28</sup> Implicit in this analysis was the recognition of two key factors—future warfare will be fast and short, and that it will be extremely costly. The IDF lost an estimated 840 tanks, including modern U.S. M60's, 400 APC's and 109 combat aircraft in only nineteen days, along with almost 3,000 dead and 11,000 wounded.<sup>29</sup> The Arabs lost 447 aircraft and over 2,500 armored vehicles in the same period, most in the last few days of the war.<sup>30</sup>

Given that two forces of roughly equal combat power fight one another under equal terms, casualties will be heavy as both sides attempt to gain an advantage on the battlefield. The U.S. Army of the future can learn two main lessons from the 1973 Arab-Israeli War. First, the IDF assumed that they had complete technological and doctrinal superiority over the Arab forces, based upon their overwhelming victory in the 1967 conflict. Secondly, the IDF and the Israeli government assumed that their extensive intelligence network in the Middle East, along with assistance from the United States, would guarantee that their armed forces would always possess informational superiority, and could engage and defeat their enemies in detail with their smaller, but better, military. In the former, the IDF discovered that the Arab alliance, especially the Egyptians, had wholeheartedly embraced new technologies, especially ATGMs and SAMs, that greatly inhibited their baseline combat systems—tanks and fighter-bombers. In the latter point, the Egyptian surprise air attacks, and their use of specialized assault troops in forcing crossings of

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<sup>27</sup>DuPuy, Elusive Victory, 456-57.

<sup>28</sup>The 1973 war's impact on the U.S. military was critical in the reforms of the 1970's and 1980's. From joint operations to recruitment and training, the U.S. Army changed to meet the new challenges. See Paul Herbert, Deciding What Has to Be Done: General William E. DuPuy and the 1976 Edition of FM 100-5, Operations (Ft. Leavenworth, Kan.: Combat Studies Institute, 1988), 25-36.

<sup>29</sup>DuPuy notes that as a ratio of the Israeli population, these losses are equivalent to the United States losing 132,000 dead in the same period. See Elusive Victory, 603.

<sup>30</sup>DuPuy, Elusive Victory, 606-609.

the Suez Canal, combined to create strategic surprise on the Israelis. Consequently, the initial IDF counterattacks were piecemeal and ineffective.<sup>31</sup>

For the Interim and Objective Forces, the U.S. Army assumes nearly total informational and technological superiority, much like the IDF did before October 1973, is a given. Survivability in the future force is based on knowing where the enemy is and ensuring that he is blinded to friendly forces, along with physical dispersion of friendly forces on the battlefield and increased lethality of future friendly combat systems.<sup>32</sup> In a symmetrical/conventional conflict, an enemy can overcome friendly information dominance by many ways, from a well-planned misinformation campaign in the international media to the use of cyber attacks to destroy critical friendly information systems. With a level playing field between the opposing forces, then the U.S. could find itself in the position of the IDF in 1973—taking heavy losses when none were expected or planned. The future Army cannot be organized based on the premise that the Interim and Objective Forces will never be surprised and will never take catastrophic casualties; to do so would set the conditions that nearly cost Israel the 1973 War.

### **The Battle of Gronzy, Chechnya, January 1995: Asymmetrical/ Unconventional Conflict**

For an asymmetrical/unconventional conflict, the same danger of heavy U.S. casualties in a short period exists and in many ways is much more unpredictable. The case of the intense fighting in and around the Chechen city of Gronzy in January 1995 provides a second case supporting the realities of casualties in modern warfare. The fighting in Gronzy began in mid-December 1994, as Russian troops moved into Chechnya to quell opposition forces led by an ex-Soviet Air Force General, Dzhokhar Dudayev. Dudayev had dissolved the Chechen parliament in

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<sup>31</sup> Gawrych, *Albatross of Decisive Victory*, 5-8, 81-82.

<sup>32</sup>The Army's modernization plan focuses much of its attention on enhancing situational awareness for the Objective Force through heavy investment in C4ISR systems that complement enhanced lethality of future

early 1993, and had brutally repressed his opposition, who had in turn started a guerrilla campaign. In addition, Dudayev openly announced his desire to free Chechnya from the Russian Federation; consequently, Russian military forces intervened to support the anti-Dudayev forces and crush any independence movement.<sup>33</sup>

By late December, the Russian columns had reached Gronzy, capital of the Republic of Chechnya. While they had met some resistance during the advance, nothing prepared them for the brutal street fighting in Gronzy itself. Reminiscent of the siege of Stalingrad during World War II, Chechen forces loyal to Dudayev had decided to fight house-to-house within the city, negating the Russian superiority in armor, airpower, and intelligence-gathering abilities. The result was a brutal slugging match in which staggering casualties on both sides were the norm.<sup>34</sup>

The Russians led their assault into the city with the 131<sup>st</sup> Motorized Rifle Brigade and the 81<sup>st</sup> Motorized Rifle Regiment, both equipped with modern tracked and wheeled APCs, tanks, and attack helicopters. It was a disaster. An estimated 20,000 Chechen fighters occupied the city, and their leaders, with a casual disregard for the civilian populace, ordered the city held at all costs.<sup>35</sup> The two lead elements were chopped to pieces; one estimate of the Russian casualties stated that in “one column alone, 102 out of 120 armored personnel carriers and 20 out of 26 tanks were destroyed by Chechen anti-tank fire; and all six ‘Tunguska’ surface-to-air missile systems were also destroyed.” The Chechen forces captured at least seventy-four Russians and the Russians admitted to losing 100 men a day during the first weeks of January.<sup>36</sup> The 1,000-

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weapon systems. See HQDA, Army Modernization Plan 2001, 29-31.

<sup>33</sup>Timothy Thomas, “The Caucasus Conflict and Russian Security: The Russian Armed Forces Confront Chechnya III: The Battle for Gronzy, 1-26 January 1995,” Journal of Slavic Studies 10/1 (March 1997): 50.

<sup>34</sup>Gregory J. Celestan, “Wounded Bear: The Ongoing Russian Military Operation in Chechnya,” August 1996, available online at [www.fas.org/man/ops/war/docs/wounded.htm](http://www.fas.org/man/ops/war/docs/wounded.htm), 3-4, last visited on 15 November 2001.

<sup>35</sup>Raymond C. Finch, “Why the Russian Military Failed in Chechnya,” Foreign Military Studies Office, Ft. Leavenworth, Kan., available online at [www.fas.org/man/dod-101/ops/war/docs/yfusfail.htm](http://www.fas.org/man/dod-101/ops/war/docs/yfusfail.htm), 9, last visited on 1 November 2001. Both the Russians and Chechens showed little regard for the civilian populace during the battle; an estimated 10-15% of the population of the entire region were either killed or fled during the conflict. See *ibid.*, 10.

<sup>36</sup>Thomas, “The Caucasus Conflict and Russian Security,” 51-52.

man 131<sup>st</sup> Motorized had lost, during the first three days of action, 800 men killed, wounded or captured.<sup>37</sup>

After the war had subsided, commentators, both military and civilian, examined the ostensibly poor performance of the Russian military during the battle. Numerous factors emerged to explain the high casualties, from the poor training of the Russian conscripts, to inadequate logistical support and faulty Russian tactical leadership.<sup>38</sup> Yet, no historian or military thinker has addressed the simple fact that urban combat devours armies—a basic tenet of military operations since the Roman legions. For the future Interim and Objective Forces, urban warfare will be a reality and the likelihood of heavy casualties more than theory. The U.S. Army has recognized that “the [future] adversary will hide and disperse large formations in areas of physical and moral sanctuary often located in complex, urban terrain and shielded by civilians and man-made structures.”<sup>39</sup> To meet this challenge, the IBCTs are “designed and organized primarily for employment in SSCs [Small Scale Contingencies] in complex and urban terrain,” yet have made no provision for the replacing the higher casualties that have been traditionally expected from city fighting, and demonstrated so blatantly by the Russians in 1995.<sup>40</sup> While the Interim and Objective Forces both possess streamlined and substantially more effective methods for casualty evacuation, neither concept addresses the system to replace killed or severely wounded soldiers.<sup>41</sup> The lessons of Gronzy demonstrate again the potential lethality of urban

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<sup>37</sup>Timothy Thomas, “The Battle for Gronzy: Deadly Classroom for Urban Combat,” Foreign Military Studies Office, Ft. Leavenworth, Kan., available online at [www.fas.org/man/dod-101/ops/war/docs/990000-battle.htm](http://www.fas.org/man/dod-101/ops/war/docs/990000-battle.htm), 3, last visited on 1 November 2001.

<sup>38</sup> See Finch, “Why the Russian Military Failed in Chechnya” and Lester Grau, “‘Soft Log’ and Concrete Canyons: Russian Urban Combat Logistics in Gronzy,” Foreign Military Studies Office, Ft. Leavenworth, Kan., available online at [www.fas.org/man/dod-101/ops/war/docs/991000-softlog.htm](http://www.fas.org/man/dod-101/ops/war/docs/991000-softlog.htm), last visited on 1 November 2001.

<sup>39</sup>HQDA, Army Modernization Plan 2001, 7.

<sup>40</sup>*Ibid.*, 16.

<sup>41</sup>IBCT O&O, 30 June 2000, 42-44, 61-62. In the IBCT O&O, little attention is paid to replacement operations, other than a single note that “the brigade S1 and echelons above division personnel service support units perform all manning functions for the brigade,” including personnel replacement. However, there is no discussion on how these units are to perform this function given the increased tactical and operational tempo of the IBCTs. See IBCT O&O, 61-62, and Chapter 3 of this monograph for details.

warfare, areas in which the future U.S. Army is expected to not only operate, but fight and win decisively.

### **Counting the Dead: Using History to Determine Future Casualties**

In On War, Prussian theorist Carl Von Clausewitz wrote, “historical examples clarify everything and also provides the best kind of proof in the empirical sciences,” and made good use of military history to support his theories on the nature of war.<sup>42</sup> In the twentieth century, military historians, planners and statisticians attempted to do the same by calculating casualties of past conflicts to determine key issues to modern war, including replacement rates, national mobilization and combat medical support. One such study is retired U.S. Army Colonel Trevor N. DuPuy’s Numbers, Predictions and War: The Use of History to Evaluate and Predict the Outcome of Armed Conflict. An acclaimed military historian as well as a decorated combat veteran, DuPuy looks at the quantitative issues surrounding modern war from a historical perspective. Although he is careful in noting, “I have found that [military history alone] is not a reliable guide” for determining the future, he does draw some interesting conclusions about casualty trends in the past.<sup>43</sup> First, he notes that the biggest jump in casualties, as a percent of combatants involved, occurred in the period 1850-1870, as the combination of rifled artillery and the conical bullet (the Minié ball) invalidated the infantry’s dense linear tactics. The results included the huge casualty numbers of the Crimean War and the American Civil War.<sup>44</sup>

In response to the increased lethality of the battlefield, opposing armies dispersed to avoid creating large targets for enemy fire. Surprisingly, DuPuy found that tactical dispersion alone did not lessen the casualty rates significantly after the 1860’s. In contrast, armies discovered new technologies to overcome dispersion and create the conditions to cause

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<sup>42</sup>Carl von Clausewitz, On War, trans. Michael Howard and Peter Paret (Princeton, N.J.: Princeton University Press, 1989), 170.

<sup>43</sup>Trevor N. DuPuy, Numbers, Predictions and War: The Use of History to Evaluate and Predict the Outcome of Armed Conflict (Fairfax, Va.: HERO Books, 1985), 5.

<sup>44</sup>*Ibid.*, 6-10.

substantial enemy casualties. DuPuy, looking at wars throughout the twentieth century, bluntly stated that “there has not been a steady decline in casualty rates” but “rates have fluctuated wildly.”<sup>45</sup> Figure 1 outlines DuPuy’s hypothesis.

The consequence of Figure 1 is that while casualty rates can widely vary in sustained combat operations between symmetrical forces, in general, the U.S. Army’s traditional planning factor of one to three percent daily losses (depending upon intensity of the combat, one percent usually represents minor engagements, while the three percent estimate reflects sustained heavy combat) is supported by solid historical evidence. Dispersion on the battlefield, a key strength of the proposed Interim and Objective Force Army, has little effect on casualty rates according to the study. When an army develops a new weapon, such as the machine gun, the opposing side

War	Length of Combat	% of Casualties per day
World War I (US)	6 months	2
World War II (US)	4 years	0.9
Korea (US & UN)	2.5 years	0.8
1967 Mid East War (IDF)	6 days	2.8
1973 Mid East War (IDF)	19 days	1.8

**Figure 1. DuPuy's Combat Casualty Rates (1985)**<sup>46</sup>

would disperse further on the battlefield to prevent catastrophic casualties. Such were the lessons from the American Civil War, the First World War, and with the advent of air and mechanized forces in World War II—armies covered more ground to both increase their survivability and

<sup>45</sup>Ibid., 10.

<sup>46</sup>Ibid., 11. Extracted from Figure 1-6, this includes rates for Soviet forces in 1944, US forces in Vietnam (baseline percentage of combat-to-support troops per year only, no data on daily casualty rates) and Egyptian and Syrian forces from the 1967 and 1973 wars.



their mobility.<sup>47</sup> For the future U.S. Army, operations on a non-contiguous battlefield are a natural evolution of historical trends that began with the rifled musket; trends that have shown as their only real commonality the daily casualty rates of sustained combat.

The Tactical Analysis Division of the U.S. Army's Concepts Analysis Agency went a step farther than DuPuy in using historical examples as a basis for calculating losses in future warfare. The CAA study looked at nearly 400 years of warfare in the West, and included such variables as environment, force sizes, supporting fires and lethality of weapons. The results are surprising. For example, they found that "battle durations have tended to increase" due to the expansion of the battlespace over time, while "attacker and defender [total battle casualties] have declined over time and tended to be nearly equal."<sup>48</sup> However, since the length of operations have increased from single decisive battles to year-spanning campaigns, and that the size of armies has grown exponentially since 1700, the overall casualty numbers during extended wars have greatly increased regardless of the duration of individual fights. Simply put, the lethality of the individual battle has stayed relatively the same over the past 400 years, tempered only by the growth of national armies in size and the length of the wars themselves, both of which have led to higher total casualties but not a higher percentage of losses covered by the study.

For the Interim and Objective Forces, several key points of the study are applicable. First, the researchers found that smaller forces have both inflicted higher casualties on the enemy, while taking substantially higher proportion of casualties themselves, ostensibly due to "a result of the diminishing returns to scale."<sup>49</sup> For the future Army, this means that leaders can expect their smaller but lethal units to cause heavy enemy losses, but take proportionally higher casualties themselves, which will have a greater impact upon mission accomplishment. For

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<sup>47</sup>Ibid., 28-31.

<sup>48</sup>Tactical Analysis Division, U.S. Army Concepts Agency, Research Paper CAA-RP-95-1: Personnel Attrition Rates in Historical Land Combat Operations: Some Empirical Relations Among Force Sizes, Battle Durations, Battle Dates and Casualties (Bethesda, Md.: U.S. Army Concepts Analysis Agency, 1995), 1-3, 1-4.

<sup>49</sup>Ibid., 1-4.

example, the loss of a single infantry squad from an Industrial Age army, given the huge size of a division in the era, was a relatively insignificant loss of combat power. In the future, the loss of a squad in an Objective Force brigade, given its greater abilities, will have a substantially larger impact on the overall combat effectiveness of the unit as a whole. Lastly, the researchers discovered that World War II divisions fighting in Western Europe lost 1-3% of their combat personnel every day during sustained combat operations; this number was nearly the same as that of the 1973 October War, again validating the U.S. Army's traditional casualty rate calculations.<sup>50</sup>

To overcome the tyranny of the one to three percent historical casualty rate, the U.S. Army has focused instead on leveraging new technologies and new doctrine in the development of the Interim and Objective Forces. In the late 1990's, the U.S. military absorbed many of the lessons of the 1991 Gulf War, and new studies emerged focusing on future warfare. The idea of asymmetrical and non-contiguous warfare, cornerstones of the Army transformation program, grew out of the Gulf War. One key principle that developed was the idea of force concentration in time and space to defeat numerically superior enemies with smaller forces while taking fewer casualties. One researcher defended the "principle of efficient force concentration as a means of minimizing losses while defeating an enemy force, particularly one that is numerically superior," as the central theme of the future U.S. Army.<sup>51</sup> As outlined in the Objective Force White Paper, the U.S. Army must overcome the attrition of the past by having overwhelming combat power at the appropriate place and time, and then disperse combat forces quickly enough to prevent an enemy from massing fires against them.<sup>52</sup> The study concludes that "to win, it is necessary only that a force be large enough and effective enough" to complete its assigned mission, but notes, "beyond this, the larger the force is, the smaller its percentage of casualties will be in the course

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<sup>50</sup>Ibid., B-7, B-8.

<sup>51</sup>David L. Bitters, "Efficient Concentration of Forces, or How to Fight Outnumbered and Win," in Jerome Braken, Moshe Kress and Richard Rosenthal, eds., Warfare Modeling (Danvers, Mass.: John Wiley and Sons, 1995), 251.

<sup>52</sup>Headquarters, Department of the Army, White Paper: Concepts for the Objective Force, 2001, available at <http://www.objectiveforce.army.mil/oftf/pages/ObjectiveForceWhitePaper.pdf>, last visited on 9 March

of winning.”<sup>53</sup> Simply put, a smaller force can defeat a larger one with superior mobility and fires, but if the larger force decisively engages it, it will take heavier casualties to win.

## Conclusions

Based on the historical examples of the twentieth century, and supported by quantitative studies, the impact of casualties in the future will be substantially more disruptive of future U.S. forces than in the past, given the greater relevance of small unit performance on a widely dispersed battlefield.<sup>54</sup> In Industrial Age armies, the ability to reconstitute their forces faster than their opponents led to victory. In contrast, future wars may depend more upon the ability of the combatants to quickly win small firefights while taking as few casualties as possible. Consequently, the loss of any significant portion of the force endangers the ability of a force to defeat its opponent.

However, the conflicts in the Middle East and in Chechnya demonstrate that warfare in the last decades of the twentieth century were bloody affairs. The constant evolution of military technology continually imbalances the equation, as DuPuy noted in his study of the changes in warfare. For the Russians in Chechnya, the realization that modern intelligence-gathering technology and military hardware still did not overcome the old adage that ‘cities eat armies’ was a shock. For the United States Army, with the IBCTs focus on urban combat, the lesson of the Battle of Gronzy is clear—if you fight in a city, expect heavy casualties. Given the importance of the individual team, squad and crew in winning the firefights of the future, rapidly replacing losses in these units will be critical to ensure victory. Sadly, the current U.S. Army personnel replacement system is in no way ready for either the tempo or the attrition of future warfare.

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2002, 7-8.

<sup>53</sup>Bitters, 270.

<sup>54</sup>HQDA, White Paper, 3, 10-14, 16.

## CHAPTER THREE

### **96 Hour Warriors and Six Month Replacements: The Current Replacement System and the Future Army**

#### **Introduction**

The senior leaders of the U.S. Army have based the future force around several concepts, the most innovative being rapid strategic deployability. In the 2001 U.S. Army White Paper, Concepts for the Objective Force, one of the stated goals of the Interim and Objective Forces is “to deploy a brigade combat team anywhere in the world in 96 hours after liftoff, a division on the ground in 120 hours, and five divisions in theater in 30 days.”<sup>55</sup> The purpose is clear: put soldiers and their equipment on the ground to either quickly to prevent conflict or conclude it. By injecting a temporal requirement into the Army’s visualized future force, a mismatch develops between how the Army presently replaces battlefield losses and how the Interim and Objective forces will operate. While it is easily within the realm of the possible that lethal and effective forces can deploy within 96 hours, these ‘96 Hour Warriors’ will be a one-shot army—if any substantial losses are taken, weeks will pass before the first replacement arrives. If mobilization is required, the time before the first new soldier reaches the battlefield is measured in months. Neither option is a viable solution to the requirements of a future U.S. Army, where the requirement to respond rapidly to global hotspots may mean little or no time for preparing the personnel sustainment base for replacement operations.<sup>56</sup>

Four major areas directly influence the present U.S. Army system of replacing losses.

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<sup>55</sup> HQDA, White Paper, 9.

These include the peacetime replacement system, which can handle limited battlefield casualties without substantial changes in organization or personnel, and the wartime replacement system. The wartime system is an expansion of the peacetime replacement system and makes extensive use of U.S. Army Reserve forces and personnel in the training base as well as for individual replacements. Tied closely to the mobilization of the Reserves is the mobilization of the nation itself through conscription. Together, the peacetime and wartime personnel replacement system forms a complex and multifaceted approach to providing soldiers to the combatant commands that has proven successful in the past. However, this system commits the cardinal sin of Army Transformation—it is too slow.

### **Present Replacement System**

In the past, the U.S. Army has depended upon the *slowness* of its deploying forces to provide time to establish a working replacement system. For example, a Force XXI mechanized brigade could take upwards of a month to reach a port of disembarkation (POD) by sea. During this month-long period, critical mobilization units of the U.S. Army Reserve reported to duty and set up the entire system for mobilizing replacements, from CONUS Replacement Centers to expanding basic training companies. Given the 96-hour requirements of the future Objective Force U.S. Army, the tempo of operations has passed the ability of the present system to mobilize quickly enough to begin to provide replacement personnel.

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<sup>56</sup>Ibid., iv., 9.

The current U.S. Army system of battlefield reconstitution, as noted above, is a complex series of steps designed either to reinforce existing units with new personnel or to rebuild units entirely. To fully understand the process, several concepts need clarification. First, reconstitution is defined as “an action planned and implemented by a commander to restore units to a desired level of combat effectiveness commensurate with mission requirements and available resources.”<sup>57</sup> The unit itself, with limited assistance from external organizations, conducts reconstitution. In general, reconstitution is a constantly ongoing process conducted during ongoing operations. In the Objective Force, reconstitution will continue to be a continual process, but will have a much smaller deployment ‘footprint’ than in the past, with a greater dependence upon automation and reach-back to the CONUS sustainment base.<sup>58</sup> For the future U.S. Army, reconstitution operations will take place while the units are in the field, and will be the primary unit rebuilding process.

Regeneration is a much more difficult and time-consuming operation, involving the rebuilding of the entire unit from ground up. It has been long expected that regeneration of an existing unit would take place after either sustained and costly combat operations, like the rebuilding of the 28<sup>th</sup> Infantry Division following the Hurtgen Forest offensive in 1944, or after a mass-casualty producing attack. FM 12-6 defines regeneration as “the rebuilding of a unit . . . [that] requires large-scale replacement of personnel, equipment, and supplies . . . [it] may involve reestablishing or replacing the chain of command . . . [and] involves conducting mission essential training to get the regenerated unit to standard with its new personnel and equipment.”<sup>59</sup> Regeneration, even in an established theater with ample facilities and a mobilized CONUS support base is difficult at best and requires the massing of significant command and control, and

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<sup>57</sup>Headquarters, Department of the Army, FM 12-6, Personnel Doctrine (Washington, D.C.: GPO, 1994), 1-3.

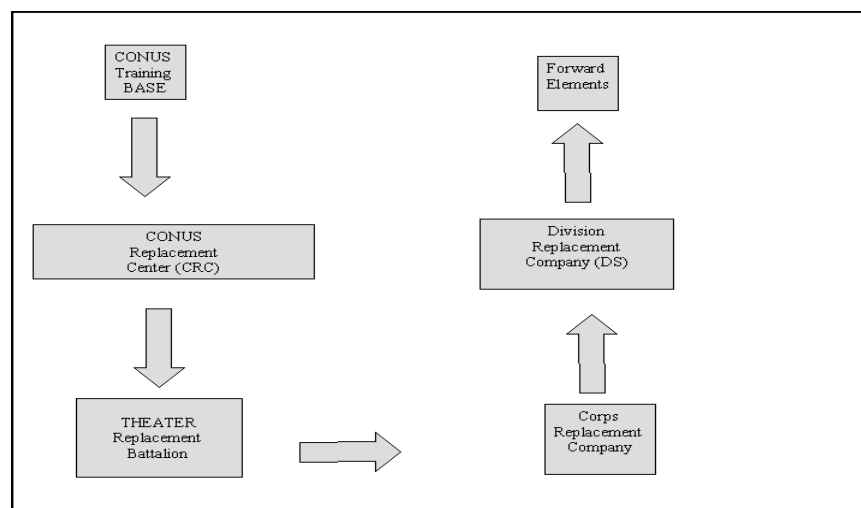
<sup>58</sup>Combat Service Support Battle Lab, U.S. Army Combined Arms Support Command, Ft. Lee, Virginia, Objective Force O&O (Draft), dated 4 December 2000, Appendix A to Chapter 5 (Sustainment), 5-12 to 5-15.

<sup>59</sup>*Ibid.*, 1-4.

logistical, assets to perform. In contrast to reconstitution, regeneration requires external organizations for support, usually combat service support elements within the theater.<sup>60</sup>

## Wartime Replacement System

The unit rebuilding system currently in use in the U.S. Army is relatively unchanged since World War II. Figure 2 outlines the basic flow of replacements from the CONUS training base to the forward deployed elements within a mature theater of operations:



**Figure 2. Wartime Replacement Flow Operations (2001)**

For the future U.S. Army, several problems exist with the current wartime replacement system that go counter to the vision for the future Army. First, there are no standing CONUS Replacement Centers (CRCs) or Theater Replacement Battalions in the active forces. The Army must first mobilize all such units from the U.S. Army Reserve before establishing the replacement system. Not counting for the initial mobilization of the CRC personnel, at least ten days are required to begin replacement operations.<sup>61</sup> At a minimum, several weeks would be required to establish an efficient and fully capable CRC. This estimated period includes finding suitable

<sup>60</sup>Ibid., 1-5.

facilities in the POE for the unit, gathering and mobilizing key personnel, and other critical tasks required for a functional CRC.<sup>62</sup>

The second major issue with the present wartime replacement system is the extensive time needed to move a single replacement from the CONUS Training Base to the fighting forces.

CONUS CRC	96 Hours
Theater Replacement Battalion	24 Hours
Corps Replacement Company	24 Hours
Division Replacement Company	24 Hours
Brigade Support Area	---

**Figure 3. Time Estimates for Replacement Flow, CONUS to Brigade<sup>63</sup>**

At a minimum, a soldier entering the CRC is 168 hours from arriving as a replacement in a brigade, not counting travel time from CONUS to the theater (See Figure 3).

The time delay of nearly a week for a replacement to move from CONUS to the brigade does not include the amount of time devoted to requesting a replacement from the losing element. While the SIDPERS computer system, along with other automated personnel software, alleviates

<sup>61</sup>Ibid., 4-5.

<sup>62</sup>According to FM 12-6, Personnel Doctrine, a single Active component Replacement Company takes at least twelve days to stage, deploy and begin operations. For Reserve component forces, especially the larger Theater Replacement Battalions and the CONUS-based CRC's, the time to set up a functional organization, much less deploy, would take substantially longer than twelve days (see FM 12-6, Chapter 4 and Chapter 23). In addition, the lift assets needed to move replacement organizations from CONUS to the Theater of Operations are substantial. For example, a Replacement Battalion requires that thirty percent of all its MTOE equipment and personnel be moved in a single lift to ensure that operations can begin after arrival; a Replacement Company requires at least fifty percent of its soldiers and equipment in a single lift. See FM 12-6, 16-3.

<sup>63</sup>FM 12-6, 4-2, 4-3.



much of the time delay needed to request new personnel, it would take several days just for the formal request for a replacement to go from brigade to CRC. Consequently, the present system may take as long as ten days to gain a replacement, especially in an austere theater, the very type of operational environment visualized for the Interim and Objective Forces. The consequences of the ten day replacement delay are obvious—any losses taken in the initially deployed forces, especially if an enemy uses a mass casualty producing weapon or if heavy losses are taken in a short time, cannot be replaced quickly enough to ensure continued operations.<sup>64</sup>

In effect, two temporal issues face the Interim and Objective forces concerning personnel replacement issues. First, the initial wave of replacements needed to support the units deployed initially to theater under the 96-hour brigade concept. Secondly, the long-term personnel replacement requirements that emerge if the future Army finds itself conducting campaigns that span months instead of weeks. The time required to mobilize and establish working CRC's, and the delay in moving individual replacements from CONUS to Brigade create the largest single obstacle to sustaining the Interim and Objective Force units during initial combat operations, but are not major concerns during lengthy campaigns. Given that the U.S. Army has visualized both the Interim and Objective Force operating without pre-established forward operating bases, and that the Army's emphasis on strategic relevance requires that the future force deploy with little or no warning of conflict, a critical vulnerability has developed between getting the fighting troops to the action and keeping them in the fight. The '96 Hour Warriors' can get to the battle quickly, and can fight initially, but any losses they take will require weeks to replace even if the support base was mobilized and ready from C-Day forward. The problem becomes even greater if the United States Army is not ready for a sustained and costly war through mobilization of national manpower, or activation of the U.S. Army Reserve.

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<sup>64</sup>The Combined Arms Support Command has developed a concept plan for sustainment in the Objective Force that includes a "seamless sustainment system" from CONUS to the deployed forces. However, the focus on the system is for logistical sustainment. See Combat Service Support Battle Lab, U.S. Army Combined Arms Support Command, Ft. Lee, Virginia, Objective Force O&O (Draft), dated 4 December

## **Mobilization and the Future Army**

### **Conscription**

The United States has long depended upon its citizenry in time of war to provide the manpower for its army. The present mobilization system, at its core, still depends upon national mobilization and conscription to expand the U.S. Army during time of war or national emergency. Since 1917, the United States has depended upon the Selective Service System to organize and mobilize national manpower, with the U.S. Army as the primary responsible agency in the Armed Forces for training and organizing newly inducted conscripts. For the future force, the present conscription and mobilization system is inadequate to either quickly provide replacements for the forward deployed forces or to release active duty or activated reserve personnel to provide immediate replacements for combat losses.

To understand the time involved in conscripting and mobilizing the U.S. citizenry, a basic overview of the authority and process for Selective Service is required. The authority for mobilization of U.S. citizens comes directly from the Second Amendment of the U.S. Constitution, as modified by Title 10, U.S. Code. Title 10 USC (311) states that the “militia of the United States consists of all able-bodied males at least 17 years of age and . . . under 45 years of age who are, or who have made a declaration of intention to become, citizens of the United States and of female citizens of the United States who are members of the National Guard.”<sup>65</sup> In effect, it means that every able-bodied male not in the organized militia (the National Guard or Reserves) or on Active Duty are members of the unorganized militia and liable for conscription.

While the Federal government possesses the authority to conscript citizens for war, the political and social issues surrounding Selective Service are obvious. Consequently, the actual

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2000, Appendix A to Chapter 5 (Sustainment).

<sup>65</sup>Available online at <http://www4.law.cornell.edu/uscode/10/311.html>, last visited on 12 December 2001.

conscription process is slow, ponderous and requires substantial financial and political support from Congress to begin. First, the President requests the authority to activate the Selective Service and begin conscription through Congress. After both houses of Congress approve the “Act to Conscript Members of the Unorganized Militia,” Selective Service is activated and begins notifying randomly selected 20 year olds, followed by 21 through 25 year olds, to report for induction. After the required “physical, mental and moral” examinations, and after sufficient time for formal appeals due to hardship or other considerations, the inductee reports for basic training.<sup>66</sup>

For the future U.S. Army, the key point about the traditional conscription system is the extremely long time delay involved in mobilizing, training and deploying draftees and volunteers. According to Selective Service regulations, the first inductees arrive to begin training no later than 193 days after Congress has approved the Conscription Act. Add to this factor necessary training time and the requirement under Title 10 USC that stipulates that no soldier will serve overseas without first serving at least four months in CONUS (including basic and advanced training), the first replacements will arrive in theater no earlier than *313 days* after passage of the Act. For a forward deployed IBCT or Objective Force element, taking heavy casualties and needing immediate replacements, waiting nearly a year for the first soldier is unacceptable. However, if the future forces find themselves in a campaign that last months, then conscription continues to be a viable alternative for manpower.

#### Active Duty Training Base Forces

Given that conscription takes nearly a year to produce the first replacement soldier, there are two remaining alternatives for rapidly providing replacements to the future Army: Soldiers already in the training base and members of the Army Reserve. The training base of the U.S.

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<sup>66</sup>Selective Service website at <http://www.sss.gov/seq.htm>, last visited on 12 December 2001.

Army is defined in this work as the soldiers presently in basic and advanced individual training, officers in basic courses, and soldiers attending initial entry training courses.

The most recent survey of the Army's training capacity was released in 2000, covering Fiscal Year 1999. In FY 1999, the U.S. Army could provide a small but constant flow of replacements to replace battle casualties and maintain the Army's overall force strength. Four key training base locations—Forts Benning (Infantry), Knox (Armor), Sill (Artillery) and Leonard Wood (Combat Maneuver Support)—are listed in Figure 4. Without substantial augmentation from USAR Training Divisions, and under the present schedule for training, these posts are capable of producing the trained soldiers annually and weekly as noted. However, these numbers include requirements for the entire U.S. Army, not only for forces that are in combat. The significance of the data in Figure 4 is that the current force structure has only a limited capacity to replace losses with newly trained personnel. Given that the future Army could need replacements almost immediately, the need to plan for the use of new soldiers upon alert is critical. The peacetime training base, even if surged during a national emergency, could still only provide a limited number of replacements to the fighting forces in the first few weeks of a conflict. Short of stripping other active duty units for replacements, which in turn reduces their ability to serve as follow-on units to the engaged forces, only one other alternative under the present replacement and mobilization system exists, use of the U.S. Army Reserves.

### Reserve Forces

Since 1973, the U.S. Army has depended upon the mobilized Reserves to provide critical combat support and service support assets not manned in the Active force. Consequently, the United States has called up Reservists on numerous occasions, from the 1973 Yom Kippur War crisis, to the more recent response to the 11 September 2001 terrorist attacks. As regards the future Army, however, the use of Reserve forces to either provide individual replacements through the Individual Ready Reserve (IRR) and Individual Mobilization Augmentee (IMA)

programs, or through the use of entire Troop Program Units (TPU) of the Army Reserve to replace Interim and Objective Force active duty units is doubtful for several reasons.<sup>67</sup>

First, the U.S. Army has earmarked nearly 35,000 Reservists to oversee the expansion of the CONUS training base and are unavailable for use as replacements. Specifically, the Army has designated seven USAR divisions to provide instructors, drill sergeants and other key personnel needed for full or total mobilization.<sup>68</sup> Additionally, the post-Vietnam reorganization of the USAR from a replacement pool to deployable units has further reduced the number of available personnel for individual replacement assignment. For example, of the 395,673 soldiers of the Ready Reserve (Troop Program Units (TPU), Active Guard and Reserves (AGR),

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<sup>67</sup>The State governors control the U.S. Army National Guard, while part of the overall reserve of the United States, until Federalized. The political consequences of using the National Guard as a replacement pool for active duty units is outside the scope of this work. However, it can be safely assumed that the National Guard will be unavailable for individual replacements in any substantial numbers, but will act as follow-on or backfill forces for active Army elements. In all the following discussion, National Guard forces are not considered in either mobilization or in replacement numbers.

<sup>68</sup>See Tab A and Tab B, Annex T, TRADOC Mobilization and Operations Planning and Execution System, at [www-tradoc.Monroe.army.mil/tpubs/tmopes/annext.htm](http://www-tradoc.Monroe.army.mil/tpubs/tmopes/annext.htm), last visited 1 October 2001. These Training Divisions are not organized, as MTOE warfighting divisions, having only a small command and staff element, no maneuver forces and a nearly nonexistent logistical structure. They are intended only as administrative units to oversee training, and their base strength numbers approximately 5,000 during wartime (full TDA strength). See Stauffer, Army Training, 21.

Training Post	Peacetime Maximum <sup>69</sup>	Nat'l. Emergency Surge <sup>70</sup>
	(200 soldier companies) Annual total/per week	(275 soldier companies) Annual total/per week
Ft. Benning	11707/225 <sup>71</sup>	16097/309
Ft. Knox	7533/145	10357/199
Ft. Sill	8150/157	11206/216
Ft, Leonard Wood	10885/209	14967/288

**Figure 4. Training Base Examples, FY 1999**

Individual Mobilization Augmentees (IMA) and the Individual Ready Reserve (IRR)) in FY 1999, 201,673 belonged to organized units, while 193,365 were in the IRR.<sup>72</sup>

The IRR is the organization meant to provide immediate personnel replacements to the active force, but is handicapped in its ability to do so for the visualized future Army. First, as the U.S. Army reduced in strength following the Gulf War, the number of soldiers in the IRR has followed a similar pattern. Given that each soldier signs an eight year commitment (three or four years on active duty, the remainder in the Ready Reserves, a portion of which is the IRR), the reduced troop numbers after 1992 had a ripple effect on the total number of IRR members. In FY 2000, over 183,000 personnel were in the IRR; by the end of that year, only slightly over 163,000 remained. FY 2001 and FY 2002 numbers are even worse; 156,580 and 151,270, respectively. If

<sup>69</sup>Includes BCT (basic training), OSUT (one-station unit training; both BCT and AIT in one cycle) and AIT (advanced training) totals.

<sup>70</sup>The surge numbers are extrapolated from a late-1970's study conducted by HQDA, based on a NATO vs. Warsaw Pact conflict, and does not include the capabilities of USAR Training Divisions. TRADOC TMOPES 1-97 indicates that 275 soldiers per training company is the surge capacity during emergencies. See J.R. Stauffer, Army Training Base Capacity: Input Capacities Based on Training Base Force Structure (Washington, D.C.: Linton and Co., 1979), 12, and TRADOC Mobilization and Operations Planning and Execution System 1-97 (TMOPES 1-97), at [www-tradoc.monroe.army.mil/tpubls/tmopes/annext.htm](http://www-tradoc.monroe.army.mil/tpubls/tmopes/annext.htm), last visited on 1 October 2001.

<sup>71</sup>Numbers are from ODCSPER Annual Report on Training Base Attrition (ATRRS) available at [www.odcspcr.army.mil/default.asp?pageid=36f](http://www.odcspcr.army.mil/default.asp?pageid=36f), last visited on 1 January 2002. Personnel who graduated the training courses in FY 1999 are the only ones considered, personnel who were discharged or did not finish the course in the FY are not counted. Weekly numbers are an average based on annual output.

<sup>72</sup>See [www.army.mil/usar/pdfs/cmdbrf-c.ppt](http://www.army.mil/usar/pdfs/cmdbrf-c.ppt), last visited on 1 January 2002.

the U.S. Army continues to reduce in size, the IRR will also shrink proportionally. The result of this trend is the gradual withering away of the IRR as a replacement pool.<sup>73</sup>

Secondly, the IRR members require substantial time to train before overseas deployment. TRADOC currently divides the IRR into two groups for training: those who have been on active duty in the last eighteen months, and those over eighteen months since last active service. The “short course” group attends a two-week refresher course, while the “long course” group receives four weeks of training.<sup>74</sup> This does not include any MOS retraining that may be necessary. The issue of MOS retraining could become a critical one in the future; especially during the period where Legacy, Interim and Objective Force units are all part of the Army force structure. Soldiers who served in a Legacy unit, for example, would not be able to immediately serve in an Objective Force unit without substantial retraining in excess of the minimum four-week period. Using the FY 2002 IRR strength of 151,270 soldiers, only slightly over 28,000 are eligible for the “short course” refresher program; the remaining approximately 122,000 soldiers would require a full month to retrain.<sup>75</sup>

Lastly, one important factor often ignored when discussing the training of IRR personnel is the fact that the organizations responsible for the processing, training and deployment of IRR soldiers are *Reservists themselves*, either in the USAR Training Divisions or in the mobilization organizations. Consequently, only a few IRR members can be called to duty and deployed within

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<sup>73</sup>See [www.asafm.army.mil/budget/fybm/FY02/rpa.pdf](http://www.asafm.army.mil/budget/fybm/FY02/rpa.pdf), last visited on 1 January 2002.

<sup>74</sup>See Annex T (Training) to TRADOC Mobilization and Operations Planning and Execution System, at [www-tradoc.monroe.army.mil/tpubls/tmopes/annext.htm](http://www-tradoc.monroe.army.mil/tpubls/tmopes/annext.htm), last visited on 1 October 2001.

<sup>75</sup>Using the FY 2002 strength of 151,270 and a planning factor of eight years (96 months), gives an average of 1,576 soldiers entering or leaving the IRR per month. Since only the first eighteen months (28,368) are eligible for the short retraining program, the remaining 122,902 fall under the longer program. In addition, daily attrition of personnel will take place until a Presidential call up of the IRR is authorized; if a stop-loss is announced for active duty personnel, the IRR will stop growing, and a personnel gap will emerge for every day that the IRR is not activated. In effect, stopping the flow of personnel to the IRR from the active force reduces the available replacements, since the IRR will continue to discharge personnel at the eight-year mark unless the President announces mobilization.

three weeks of mobilization, given that the units that mobilize them have to be mobilized first. The result is that the IRR will not be ready for use for months after mobilization is declared.<sup>76</sup>

## Conclusions

Given the requirement for rapid replacement of losses in the future U.S. Army, and the existent replacement and mobilization systems, several weaknesses are worth noting. First, the active force replacement system, ostensibly the organization that will ensure that Interim and Objective Force units can continue to fight, is not fully synchronized with the 96-hour deployment concept. The organizations needed for smooth replacement operations, such as the CONUS Replacement Centers and Theater Replacement Battalions, are in the Army Reserves and require substantial time to mobilize and set up operations. While the current peacetime replacement system may function well for limited casualties, it cannot meet the replacement needs caused by heavy losses. Regardless, the present system requires nearly a week for the first replacement to arrive at brigade level once it has deployed and established itself in the theater.<sup>77</sup>

The United States' national mobilization system is hopelessly out of date, organized to build a large Industrial Age army over an extended period, such as the World Wars. Sadly, it has changed little since 1945. In the past, the United States has had the luxury of both time and distance to raise forces; if the U.S. still had the geopolitical concerns of 1917 or 1941, such an option could still be viable. However, as the world's lone superpower, and committed to numerous hotspots around the globe, the ability to build an army in two years is nearly worthless. The nation will always have the option to mobilize its citizenry for war, but the one-year delay for the first trained conscript is an poor replacement option for the future U.S. Army.

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<sup>76</sup>The TRADOC Mobilization and Operations Planning and Execution System 1-97 (TMOPES 1-97) discusses the mobilization and tasks for IRR call-up and the use of USAR Training Divisions in detail, especially in Annex T (Training). See [www-tradoc.monroe.army.mil/tpubs/tmopes/tmopes.htm](http://www-tradoc.monroe.army.mil/tpubs/tmopes/tmopes.htm), last visited on 1 October 2001.

<sup>77</sup>See footnote 64.



The post-Vietnam dependence upon the U.S. Army Reserve to operate the CONUS replacement base worked well during the Cold War, much like its predecessor, national mobilization, did in the World Wars. However, the temporal requirements of the Interim and Objective Forces have made it obsolete as well. At its best, the Reserves can provide a few trained replacements from the IRR within the first month after mobilization. With the recognized lethality of modern warfare, a month for a replacement is still too long to ensure the continued operations required of Interim and Objective Force units.

More than any other factor, the lack of a rapid replacement system is the Achilles Heel for the entire Interim and Objective Force Army. Getting into battle in 96 hours is only part of the challenge—the Army must be able to stay and fight in even the most intense combat. The organizations that should provide the soldiers to the fighting forces—active force replacement units, national mobilization, or the Reserves—are presently incapable of supporting the future U.S. Army in initial combat operations, especially if substantial losses are taken soon after deployment. The current system instead focuses on a methodical personnel mobilization, training and deployment system that is best designed for long campaigns. The requirements of the Cold War, and the experiences in World War II, vindicated such a system, where long delays in producing replacements through mobilization resulted in a robust personnel replacement system. However, the time constrained environment in which the Interim and Objective Force Army will operate has placed greater demands on the current system to produce replacements from the start, a requirement that current doctrine and organizations cannot meet. To succeed in future conflicts, changes in the personnel replacement system as radical as the visualized technological changes for the future Army must be implemented. Without soldiers to operate the futuristic weapons of the Interim and Objective Forces, all of the technological advantages expected of the future Army are for naught.

## CHAPTER FOUR

### Conclusions and Recommendations

#### Conclusions

Rear Admiral Alfred Thayer Mahan, the famous naval theorist, once said, “let there be dismissed at once, as preposterous, the hope that war can be carried on without some one or something being hurt.”<sup>78</sup> Throughout this work, Mahan’s statement has formed the basis for analysis. War, regardless of era or location, is a necessarily costly business, both in lives and in resources. The future of the U.S. Army depends squarely upon its ability to defeat enemies on the battlefield rapidly and decisively. While technology continues to play a critical role in making the future force more effective, it should not overshadow other key parts of the entire ‘system of systems’ visualized for the Interim and Objective forces. The ability of the future force to replace its losses quickly during initial combat operations, especially in heavy casualty-producing environments (such as urban combat), is critical to success in the future U.S. Army. Tomorrow’s U.S. Army must not become a shallow force, capable of fighting only a single battle before it is so weakened through casualties that it is unable to fulfill its mandate from the nation—the conduct of “prompt and *sustained* combat incident to operations on land.”<sup>79</sup>

The current U.S. Army replacement system cannot adequately meet the needs of the future Army for several reasons. First, the present system, based upon the precepts of the Cold

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<sup>78</sup>Quoted in Peter G. Tsouras, ed., Warrior’s Words: A Quotation Book (London: Arms and Armour Press, 1992), 56.

<sup>79</sup>Title 10 USC, Subtitle B, Section 3062. Italics added.

War (warning through diplomatic or other indicators that war is approaching, the relative security of the continental U.S., and sufficient time to gear up national mobilization to meet personnel requirements), works extremely well if given time. Since the future Army is dependent upon getting to the battlefield faster than the enemy, time is no longer the ally of the United States Army. The future force must be capable of conducting personnel replacement for the deployed units immediately upon arrival in the combat zone. The current system can provide soldiers to the Army, given anywhere from a year for a new conscript to ten days for a soldier rushed to the front through the peacetime personnel replacement system. Simply put, no part of the U.S. Army's personnel system, either the active component or the Reserves, is capable of supplying soldiers to ensure the sustained combat operations of the Interim and Objective forces, given presently estimated casualty rates of one to three percent per day. The present system does provide a solution to long-term campaign losses, where sustained casualty rates are balanced by a robust personnel replacement pool and mobilization. However, the temporal requirements of the future Army creates a need for replacements from the first day in combat, and must be capable of providing ample replacements even in the high-intensity urban combat of the future, where casualties can quickly become catastrophic.

Secondly, the Reserve forces of the Army, specifically the Individual Ready Reserve, are not organized to provide key personnel fast enough to replace losses in the future force. As the IRR slowly reduces in size, and as the complex technology of the Interim and Objective Force Army is fielded, the usefulness of the IRR diminishes. Soldiers who served in Legacy force units, for example, will have to be retrained to serve in Interim or Objective force units; previous estimates of a month to conduct refresher training are no longer valid. In effect, the IRR will only allow the future Army to reduce the length of basic training—soldiers with previous experience will have to go to advanced individual training just to become qualified to serve in future force units.

Lastly, there are numerous implications for each issue discussed. The existence of all three types of units (Legacy, Interim and Objective) in the Army will necessitate an expansion of both the training base and the replacement base if all three types of units are in combat. In effect, the U.S. will have three different types of armies for a period of several years, with all the concordant requirements for such an organization. As cited in Chapter 3, the ability of the present training base to 'surge' recruits in larger numbers will be adversely affected by this obvious need. For example, instead of producing 275 recruits per training company, perhaps only a portion of those soldiers will be trained on Interim and Objective Force equipment, tactics and techniques, further reducing the number of replacements available to the forward deployed elements.

The 96 hour deployment requirement, and the visualized ability of the deployed units to conduct decisive operations immediately upon arrival, has placed a temporal limitation on the present personnel system that it cannot initially meet. The leadership of the Army must accept the distinct possibility that the Interim and Objective Force units, despite the advantages of twenty-four hour operations, high technology and the best trained soldiers the United States has ever produced, will take heavy casualties in a short period of time. Much as the concept of the 96 hour deployable brigade is based on an attempt to break the tyranny of time and space, so too must the support network that keeps them fighting. Consequently, several recommendations are included to provide solutions to the dilemma of providing replacements quickly to the future U.S. Army. These are divided into two sections, the first addressing issues surrounding initial deployment of forces into the theater, and the latter focusing on sustained combat operations.

## **Recommendations: Initial Deployment Force Personnel Replacement**

### **Streamlining the Active Force Replacement System**

The peacetime replacement system described in current U.S. Army doctrine is inadequate in providing replacements quickly. Field Manual 12-6 describes a system

that worked well in providing replacements within 90 days of mobilization, and the Selective Service system provided a means to sustain the initial mobilization wave. However, the requirements of the Interim and Objective Forces, given their mission to initiate operations faster than ever before, invalidate the current replacement system. Consequently, a radical restructuring of the U.S. Army's replacement system is required. This includes changes to the training base, upgrades to personnel automation systems, and elimination of parts of the current replacement flow organizations to speed up the replacement process and reduce the window of vulnerability to deployed forces.

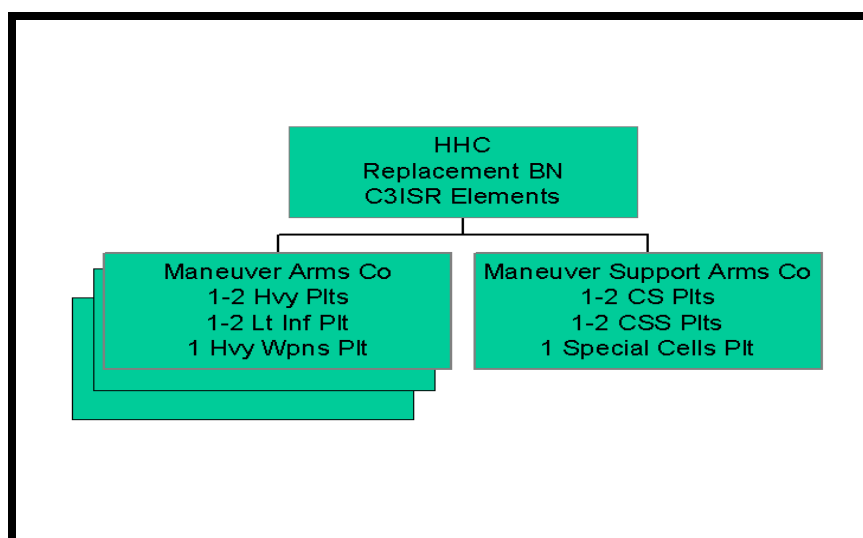
A second recommended change is a wider use of current networking automation to reduce the ten-day replacement window under current Army doctrine, which will aid both the initially deployed forces and long-term sustainment. For personnel administrators, the first priority should be a system that allows for the 'reach-back' at the lowest possible level, with minimal delays at intervening command levels. An integrated automation package visualized for the future Army that transmits a replacement request from the lowest echelon (company) directly to the Corps or JTF Replacement Battalion (with oversight at the intermediate command levels between company and Corps), and then straight to the CONUS Training Base, eliminating the need for the USAR CONUS Replacement Centers and Theater Replacement Battalions, is one option. In the austere environments in which the future Army will operate, or during operations not predicated by mobilization (such as a Panama-like operation), reducing the bureaucratic stovepipe will save critical time. In turn, the new soldier is processed for overseas duty from the CONUS Training Base and sent directly to the Corps Replacement Battalion and then to the requesting unit. The result is a reduction of at least three days from the ten day model. However, this solution will require the expansion of the CONUS Training Base to handle the additional workload, and the moving of some MOSs currently in the USAR (some of the administrative personnel in the CRCs and Theater Replacement Battalions) to the active component.

## **USAR Replacement Battalions**

The U.S. Army Reserve is currently organized into either two main groups—Troop Program Units that deploy as cohesive elements and the IRR. Since the early 1970's, the active Army has become dependent upon the TPU forces to fill critical roles during wartime, from prisoner of war camp guards to water purification units. Since an expansion of the active Army to do these roles is highly unlikely, the present TPU force structure is a reality of the future force as well.

However, a possible compromise is available through the development of a modular approach to replacements. As history has demonstrated, green replacements thrown piecemeal into units are often casualties before they can learn how to survive. The future force, with its advanced interdependent systems and emphasis on highly trained individual soldiers and teams, could become even more vulnerable to losses due to untested troops. To meet this possibility, as well as provide a readily available replacement pool, small elements (crews and squads) and not individuals should be the basis of replacement operations. A solution would be the development of a 'Reserve Battalion,' or 'RB,' attached to each IDIV or Objective Force division. The RB is organized within the Army Reserve and is intended to provide well-trained crews, teams and squads for immediate use as replacements. Unlike previous incarnations of these programs (the ROUNDUP or ROUNDOUT concepts of the 1970's and 1980's, and the current Enhanced Brigade organization of the ARNG and USAR), the RB is not a maneuver battalion as such, but an organization focused on keeping the flow of trained soldiers to the IDIV or ODIV constant and capable.

In concept, the RB would look something like the unit portrayed in Figure 5. Each element of the RB would be able to fill in for an active component, from a heavy/armor



**Figure 5. USAR Reserve Battalion (RB) Organizational Structure**

crew in one of the Maneuver Arms Companies to the Battalion Commander and his staff.

Emphasis in the RB is on training teams, not creating a fighting battalion. For example, annual training would be conducted under the direct supervision and instruction of the owning IDIV or ODIV and focused on tasks such as gunnery and squad tactics. For officers, numerous short active duty tours, especially during major exercises and deployments, with the owning active component unit would provide priceless experience and further enhance the close ties between the active and Reserve forces.

As noted in Figure 5, Combat Arms elements are the bulk of the RB's force structure, since the majority of casualties have historically come from the combat MOSs. To meet the needs of the entire spectrum of skills needed in the future force, tankers, infantrymen and artillerymen make up Combined Arms Companies, which should number between 3-5 per Reserve Battalion. The support skills necessary on the modern battlefield, such as Military Police and Transportation, would form the Maneuver Support Arms Companies (1-2 per battalion). Inclusive in these companies are the special 'cells' necessary for the conduct of

contingency operations (Provost Marshal, Civil Affairs, etc.) and as replacement officers and senior NCOs for the Divisional staffs.

In addition, the Reserve Battalion of each IDIV or ODIV could be further tied to its active duty division by assigning soldiers who leave their active component units at the end of their commitment. While this would be difficult given the fact that soldiers in the IRR are scattered across the nation, it would pay great benefits in keeping soldiers in the IRR closely tied to ‘their’ division during the remaining years of their inactive service. Additionally, soldiers who volunteer to serve their IRR commitment as part of the ‘inactive’ Reserve Battalion could receive the benefits noted above under limited conscription provided they attend refresher training on an annual or biannual basis. The result would be a layered replacement system, with the Reserve Battalion providing modular replacements to the Interim and Objective Force units, while the RB’s IRR members are being mobilized and trained for duty.

The RB’s intent is to provide replacements for the future Army’s combat units as fast as possible; ideally, and given warning, the RB’s should be ready to deploy as soon as the Interim or Objective force division is deployed (120 hours). The RB’s would be kept at the highest readiness possible for USAR units, and must be adequately funded to support such operations. In addition, the symbiotic relationship between the active and Reserve elements would be such that any alert of the IDIV or ODIV would result in the immediate mobilization of the USAR Reserve Battalion. The RB’s would become the elite of the U.S. Army Reserve, consisting of ‘modules’ of well-trained soldiers ready to fill in for losses at any level of the Interim or Objective Force structure.

#### Long-Term Personnel Sustainment

##### **Changes to the Current Army Replacement, Mobilization and Training System**

The current Army system outlined in FM 12-6 provides a workable framework for replacement operations over the long-term. However, this does not mean that the future force, as



regards to fighting an extended campaign, should simply replicate the system in FM 12-6.

Several issues arise due to Army Transformation that impact on the long-term personnel sustainment system. First, the Army must prepare the training base now for the existence of three different ‘armies’—Legacy, Interim and Objective. Since the rapidly deploying Interim and Objective Force units cannot predict when or where replacements are needed, it is impossible to reclassify soldiers in training to provide replacements quickly. The only solution is to create a flexible training base formed around possible combat requirements, not peacetime retention/recruiting forecasts. TRADOC and PERSCOM must base their training and replacement systems on MOSs identified as vulnerable to casualties (such as vehicle crewmen or light infantry), and ensure that the peacetime replacement flow provides enough soldiers for short term needs. For example, if the Army considers that 90% of all daily casualties come from the combat arms, then 90% of all daily flow of replacements to a division should come from those MOSs. In addition, the training base must have the ability to ‘surge’ rapidly to produce enough soldiers to provide up to the 3% daily casualty rate discussed in Chapter 2. Lastly, TRADOC needs to develop Interim and Objective Force soldier training programs for use during ‘surge’ periods, focusing solely upon combat skills and capable of rapidly retraining over strength combat support and service support MOSs to combat arms, to further streamline the training system. Together, these changes will allow the Army to speed up the flow of soldiers from the training base to the field, ensuring that the future Army can conduct sustained operations at a high tempo.

### **Limited Conscription**

Before 11 September 2001, a discussion of a new ‘draft’ would have been considered as legitimate as an argument for a return to horse cavalry. Events, however, intervened to make the

possibility of conscription a real one that could be palatable for the American people.<sup>80</sup> The present Selective Service system is unable to meet the needs of the future Army; it is, in effect, a system to build a new citizen army after the old Regulars are wiped out, a system that is more fitting for 1942 than 2002. However, a new limited form of conscription could play an important role in sustaining the Interim and Objective Forces over the long-term.

As noted in Chapter 3, the reduced size of the active Army is having a serious impact on the ability of the IRR to provide replacements during a crisis. However, if the United States conscripted a small number of citizens per year, no more than 100,000, and put them through basic and advanced training and then returned them to the IRR, they could provide nearly one million replacements in ten years. During the ten-year service period, the citizen-soldiers would be required to attend refresher training, no more than two weeks every two years, to keep their skills somewhat fresh. To forestall any public concerns over a draft in peacetime, the President would strictly control the use of these soldiers for active duty; using them only for wartime replacements before full mobilization. For the individual conscript, participation in the IRR should give them some concrete benefits, such as eligibility for the GI Bill or other programs previously limited to members of the active force and Reserves. Conscription need not be the only method of creating the “Reserve Army.” Given the public response to 11 September, ample volunteers could step forward to serve and prevent the necessity of passing an Act of Conscription through Congress.

## **Concluding Comments**

Today, the U.S. Army still operates within the framework of the Cold War, despite the experiences of the 1990's. Along with many of the key subsystems of the U.S. Army, such as

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<sup>80</sup>A 22 October 2001 article in the Atlanta Journal and Constitution, cited a poll that nearly 80 percent of the U.S. public supported military action in the war against global terrorism even if it meant a return to conscription. In addition, the Selective Service Administration began a new ad campaign in October 2001 to ensure that eighteen year olds were signing up. See Bill Hendrick, “Selective Service’s Rebirth Remains Faint Possibility,” Atlanta Journal and Constitution, 22 October 2001.

procurement and training, the personnel replacement system is built upon the idea that substantial time is available to mobilize and train new soldiers. In the past, the mass of a heavy division ensured that deployment times were long, and gave ample time to call up Reserves or shift troops from one active unit to another to ensure that a pool of ready soldiers were ready as replacements for casualties. That time is no more, as the IBCTs, and ultimately the Objective Force, is expected to fight and win beginning 96 hours after departing their home station. The two months for establishment of a working replacement system, considered timely when it took 90 days to mobilize and deploy a heavy division, is as archaic as wooden sailing ships and horse cavalry.

The proposals noted above are not without substantial cost. Issues surrounding the Reserve forces are often accompanied by tough political choices, and the formation of new USAR units or realigning present units would be no exception. In addition, the monetary cost to the Interim and Objective Force divisions in including USAR elements into all major training events and during contingency exercises further strains limited budgets. Lastly, any expansion of the CONUS Training Base would require realignment of the Army's force structure to provide additional training and administrative personnel and the expansion of the limited facilities at the nation's main basic training posts.

The problem with limited conscription or a call for volunteers is the distinct possibility of a reduction in patriotic fervor. If few people volunteer, or if political support for conscription waivers, the future force could find itself with the worst possible replacement situation—a system 'on the books' that prevents change yet does not perform as needed. Again, the expansion of the IRR only provides soldiers after a period no shorter than two weeks after mobilization, still presenting problems with rapidly replacing losses.

Lastly, the unwritten replacement concept of the Army, a variation of the old adage 'robbing Peter to pay Paul' through stripping some units of troops to provide for others, is becoming less viable as time passes. In World War II, a rifleman from the 1<sup>st</sup> Infantry Division had basically the same job as his fellow infantryman in the 29<sup>th</sup> Division. In the future, with the

dependence upon cohesive crews, teams and squads over sheer numbers, the ease with which the U.S. Army has cross-leveled individual soldiers cannot continue. The future U.S. Army must devote time and effort into developing a workable personnel replacement system that is truly a part of the 'system of systems,' that integrates Army Reserve forces with the active components, and is responsive and fast. The United States no longer has the luxury of time due to geographic isolation; world events now take place real-time. The U.S. Army must expect combat and the concordant casualties produced to happen at the same rapid pace, and must be ready to sustain American ground forces through a feasible replacement system.

## BIBLIOGRAPHY

### Government Documents

- Combat Service Support Battle Lab, U.S. Army Combined Arms Support Command, Ft. Lee, Virginia. Objective Force O&O (Draft). Unpublished, dated 4 December 2000.
- Headquarters, Department of the Army. Army Modernization Plan 2001. Washington, D.C.: HQDA, 2001.
- Headquarters, Department of the Army. FM 12-6, Personnel Doctrine. Washington, D.C.: GPO, 1994.
- Headquarters, Department of the Army. Interim Brigade Combat Team (IBCT) Organizational and Operational Concept Plan. Unpublished, dated 30 June 2000., at <http://www.army.mil/features/IBCT>, last accessed 15 September 2001.
- Headquarters, Department of the Army, ODCSPER Annual Report on Training Base Attrition (ATTRS), at [www.odcsper.army.mil/default.asp?pageid=36f](http://www.odcsper.army.mil/default.asp?pageid=36f), last visited on 1 January 2002.
- Headquarters, Department of the Army, U.S. Army White Paper: Concepts for the Objective Force, at <http://www.army.mil/features/WhitePaper/default.htm>, last visited on 10 December 2001.
- Selective Service Administration, "Overview of Selective Service," at <http://www.sss.gov/seq.htm>, last visited on 12 December 2001.
- Tactical Analysis Division, U.S. Army Concepts Agency, Research Paper CAA-RP-95-1: Personnel Attrition Rates in Historical Land Combat Operations: Some Empirical Relations Among Force Sizes, Battle Durations, Battle Dates and Casualties. Bethesda, Md.: U.S. Army Concepts Analysis Agency, 1995.
- TRADOC Mobilization and Operations Planning and Execution System 1-97 (TMOPES 1-97), at [www-tradoc.monroe.army.mil/tpubls/tmopes/annext.htm](http://www-tradoc.monroe.army.mil/tpubls/tmopes/annext.htm), last visited on 1 October 2001
- U.S. Army Reserve Budget, FY 2002, at [www.asafm.army.mil/budget/fybm/FY02/rpa.pdf](http://www.asafm.army.mil/budget/fybm/FY02/rpa.pdf), last visited on 1 January 2002.
- U.S. Army Reserve Command Brief, FY 2002, at [www.army.mil/usar/pdfs/cmdbrf-c.ppt](http://www.army.mil/usar/pdfs/cmdbrf-c.ppt), last visited on 1 January 2002.
- U.S. Code, Title 10 USC, Subtitle B, Section 3062, at <http://www4.law.cornell.edu/uscode/10/311.html>, last visited on 12 December 2001.

### Books

- Bitters, David L. "Efficient Concentration of Forces, or How to Fight Outnumbered and Win," in Jerome Braken, Moshe Kress and Richard Rosenthal, eds., Warfare Modeling. Danvers, Mass.: John Wiley and Sons, 1995.
- Catton, Bruce. The Army of the Potomac: Glory Road. Garden City, N.Y.: Doubleday and Co., 1952.
- Coffman, Edward M. The War to End All Wars: The American Military Experience in World War I. Madison, Wis.: The University of Wisconsin Press, 1986.
- DuPuy, Trevor N. Elusive Victory: The Arab-Israeli Wars, 1947-1974. Dubuque, Iowa: Kendall/Hall Publishing Co., 1992.
- , Numbers, Predictions and War: The Use of History to Evaluate and Predict the Outcome of Armed Conflict. Fairfax, Va.: HERO Books, 1985.
- Fehrenbach, T.R. This Kind of War: A Study in Unpreparedness. New York: MacMillan Co., 1963, reprinted Ft. Leavenworth, Kan.: USACGSC, 1994.
- Gawrych, George W. The 1973 Arab-Israeli War: The Albatross of Decisive Victory. Ft. Leavenworth, Kan.: Combat Studies Institute, 1996.
- Herbert, Paul. Deciding What Has to Be Done: General William E. DuPuy and the 1976 Edition of FM 100-5, Operations. Ft. Leavenworth, Kan.: Combat Studies Institute, 1988.
- Jones, Archer and Herman Hattaway. How the North Won: A Military History of the Civil War. Urbana, Ill.: University of Chicago Press, 1991.
- Kahalani, Avigdor. The Heights of Courage: A Tank Leader's War on the Golan. New York: Praeger, 1992.
- Krepinevich, Andrew. The Army and Vietnam. Baltimore, Md.: The Johns Hopkins University Press, 1986.
- Murray, Williamson and Allan R. Millett. A War to Be Won: Fighting the Second World War. Cambridge, Mass.: Belknap Press, 2000.
- Scales, Robert H.. Certain Victory: The U.S. Army in the Gulf War. Ft. Leavenworth, Kan.: CGSC Press, 1994.
- Stauffer, J.R. Army Training Base Capacity: Input Capacities Based on Training Base Force Structure. Washington, D.C.: Linton and Co., 1979.
- Swain, Richard M. Swain, ed., Selected Papers of General William E. DuPuy. Ft. Leavenworth, Kan.: Combat Studies Institute, 1994.
- Tsouras, Peter G., ed. Warrior's Words: A Quotation Book. London: Arms and Armour Press, 1992.
- U.S. Army Center of Military History. American Military History. Washington, D.C.: Government Printing Office, 1989.

Von Clausewitz, Carl. On War, trans. Michael Howard and Peter Paret. Princeton, N.J.: Princeton University Press, 1989.

Weigley, Russell F. Eisenhower's Lieutenants: The Campaign of France and Germany, 1944-1945. Bloomington: Indiana University Press, 1981.

-----, The American Way of War: A History of United States Military Strategy and Policy. Bloomington: Indiana University Press, 1977.

### Articles

Celestan, Gregory J. "Wounded Bear: The Ongoing Russian Military Operation in Chechnya," August 1996, at [www.fas.org/man/ops/war/docs/wounded.htm](http://www.fas.org/man/ops/war/docs/wounded.htm), last visited on 15 November 2001.

Finch, Raymond C. "Why the Russian Military Failed in Chechnya," Foreign Military Studies Office, Ft. Leavenworth, Kan., available online at [www.fas.org/man/dod-101/ops/war/docs/yusfail.htm](http://www.fas.org/man/dod-101/ops/war/docs/yusfail.htm), last visited on 1 November 2001.

Grau, Lester. "'Soft Log' and Concrete Canyons: Russian Urban Combat Logistics in Gronzy," Foreign Military Studies Office, Ft. Leavenworth, Kan., available online at [www.fas.org/man/dod-101/ops/war/docs/991000-softlog.htm](http://www.fas.org/man/dod-101/ops/war/docs/991000-softlog.htm), last visited on 1 November 2001.

"Gulf War, Iraqi Losses." At [www.wikipedia.com/wiki/Gulf\\_War](http://www.wikipedia.com/wiki/Gulf_War), last visited on 15 October 2001.

Hendrick, Bill. "Selective Service's Rebirth Remains Faint Possibility." Atlanta Journal and Constitution, 22 October 2001.

Physicians for Human Rights, "The Panama Invasion." At [http://www.phrusa.org/research/health\\_effects/humojc.html](http://www.phrusa.org/research/health_effects/humojc.html), last visited on 5 December 2001.

Sorley, Lewis. "Creighton Abrams and Active-Reserve Integration in Wartime," Parameters 21/2 (Summer 1991): 35-50.

Thomas, Timothy. "The Battle for Gronzy: Deadly Classroom for Urban Combat," Foreign Military Studies Office, Ft. Leavenworth, Kan., available online at [www.fas.org/man/dod-101/ops/war/docs/990000-battle.htm](http://www.fas.org/man/dod-101/ops/war/docs/990000-battle.htm), last visited on 1 November 2001.

-----, "The Caucasus Conflict and Russian Security: The Russian Armed Forces Confront Chechnya III: The Battle for Gronzy, 1-26 January 1995," Journal of Slavic Studies 10/1 (March 1997): 50-108.

United Kingdom, Imperial War Museum Collections. "What Were the Losses from the Gulf War?" Imperial War Museum, London, at

<http://www.iwm.org.uk/collections/books/bookfaqs17.htm>, last visited on 5 December 2001.